

REMARKS

Claims 4, 8 - 15, and 18 - 21 are in the case.

The Examiner has presented new grounds of rejection, as well as maintaining the rejection of claims 16 and 17 under 35 U.S.C. §102(b) as being anticipated by Aviani, U.S. Patent No. 5,950,205 ("Aviani.")

The Examiner has rejected claims 4, 8-21 under 35 U.S.C. §112, first paragraph, stating that the limitation regarding cryptographic hash – that it is comprised of a unique data identifier – is found nowhere in the specification.

A definition of the term "cryptographic hash" by those skilled in the art makes more clear the use of the term "unique data identifier." Cryptographic hash is defined as:

A mathematical function that maps values from a large (or even very large) domain into a smaller range, and is (a) one-way in that it is computationally infeasible to find any input which maps to any pre-specified output; and (b) ***collision-free in that it is computationally infeasible to find any two distinct inputs which map to the same output.*** (emphasis added.)

Source: The Institute for Telecommunication Sciences, which is the chief research and engineering arm of the National Telecommunications and Information Administration (NTIA). The Institute's website is at <http://www.its.bldrdoc.gov>, with the definition taken from the Institute's Telecom Glossary 2000, available by clicking through the Publications link on the Institute's website referenced webpage or at <http://www.atis.org/tg2k/>.)

It is the emphasized language in the definition above that provides the support for the "unique data identifier" language in the claims. That is, since a cryptographic hash is by definition "collision free" – and unlike Pedrizetti, which refers specifically to "possible hash table collisions" (Col. 5, lines 14 – 18) the cryptographic hash is effectively unique.

The Examiner's rejection under 35 U.S.C. §101 of claims 8-21 is acknowledged and the claims have been amended accordingly.

Applicant has cancelled claims 16 and 17 and thus obviated the rejection under Aviani.

Claims 4, 8 - 15, and 18 - 21 have been rejected, under 35 U.S.C. §103, as being unpatentable over Pedrizetti, et. al., U.S. Patent No. 6,151,708 ("Pedrizetti") in view of U.S. Patent No. 6,493,871 to McGuire, et. al. ("McGuire.") Applicant respectfully traverses the rejection.

Applicant has amended independent claims 4, 8, and 21 to make more clear what has been claimed through use of the additional limitation "second cryptographic hash installed on said target." No new matter is added by the amendment – see e.g. Summary of the Invention at page 3.

First, however, Applicant respectfully disagrees with the Examiner that Pedrizetti contains the elements of the independent claims, such as claim 4 (see the Office Action at pages 5 – 6.) Specifically, the Examiner has disregarded Pedrizetti's need to compensate for the inaccuracy of Pedrizetti's non unique data identifier – the bit map table – by transmitting a second file for comparison: "...at step 312 the associated index file corresponding to the hash number is retrieved from the server. This index file lists all files or devices having that particular hash number...At step 314, a comparison is made between the unique identifier of the client file or device in question and the entries in the index file obtained from the server." Col. 5, line 48 to Col. 6, line 2. This means the first comparison – the element the Examiner would have present in the present claims – requires a second comparison – of Pedrizetti's index file to a client side identifier. So

Pedrizetti actually has two comparisons to make, not one. These two comparisons – one of the bit map table, and one of an index file, are necessary to Pedrizetti because of the likelihood of collisions. They are nowhere present in the claims at issue. Thus, the Applicant respectfully but strenuously disagrees with the Examiner that Pedrizetti has the claimed elements, so that Pedrizetti can be combined with McGuire as the Examiner posits.

Pedrizetti's concern about collisions because of his bit map table construction cannot be disregarded. In other words, Pedrizetti cannot dismiss the possibility of collisions occurring because his table includes non unique identifiers, and so he must compensate for the possibility of collisions. See, e.g., Col. 5, lines 12-16. Because he must compensate for that possibility, and does so by transmitting a second set of information as noted in the extract above, he does not have the elements claimed by the Examiner.

As Applicant noted above, an amendment to the independent claims has been made to further make clear the differences between the claims and the cited references. Specifically, both Pedrizetti and McGuire generate their client side hash in the course of their updating procedure. For example, Pedrizetti describes the process, beginning at Col. 3, line 41: "FIG. 2 is a flow-chart showing a client checking for the availability of module updates..." Pedrizetti then goes on describing various details of the process. One of those steps is construction of the "master list" of the items to be updated. At Col. 4, line 33, Pedrizetti describes the process after the master list is built: "At step 212, after the master list of identifiers is built, a check is performed to determine whether corresponding program updates exist at the server. The details of step 212 are shown as

FIG. 3.” Thus, Pedrizetti has client side information list built in the course of the updating process – unlike the claims at issue.

McGuire is similar to Pedrizetti in building a client side hash during the comparison process. At Col. 9, beginning about line 26, McGuire has the UPDATE.EXE file, sent to it by the server, calculate the hash value for the client side files (“For each existing file found, UPDATE.EXE calculates its hash value for identifying its version. The hash process can take a short time, but occurs in the background while UPDATE.EXE is also displaying its end user agreement...”

The differences in the processes make the present claims patentably distinct from Pedrizetti and McGuire. The references build the client side hash during the process, but the claims at issue have a second cryptographic hash installed on the target.

Applicant also respectfully disagrees that the two references could be combined. For a cryptographic hash to be used, Pedrizetti would have to eliminate its construction of a bit map table by the server, construction of a bit map table by the client, transmission of that table, deconstruction of the table, comparison with the client side table, transmission of the index file, and comparison of the index file with the client side information. These elements cannot be removed from Pedrizetti without destroying the invention – see the Abstract of the Invention in Pedrizetti. If a reference can only be combined with another through destruction of the invention of the reference, it cannot be used in combination.

Moreover, Pedrizetti specifically disagrees with the Examiner that any references, such as a hash value, could be transmitted alone: “Since the client's update evaluation potentially requires checking a huge number of files for available updates, it would be prohibitive to have the client and server pass file name (or other program or hardware

module references) back and forth to determine the availability of upgrades.” Col. 4, lines 46-50. Accordingly, it appears that Pedrizetti essentially teaches against the combination the Examiner would make.

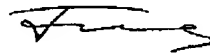
Therefore, Applicant respectfully requests the withdrawal of the rejection, and allowance of independent claims 4, 8 and 21.

Claims 9 - 15 and 18 - 20 depend from these allowable base claims, and contain all the limitations of those claims, and so are allowable as well. Thus, Applicant requests withdrawal of the rejection as to those claims, and allowance of claims 9 - 15 and 18 - 20.

CONCLUSION

Claims 4, 8 - 15, and 18 - 21 define patentable subject matter over the art of record and are not anticipated by nor obvious in view of the references of record. A Notice of Allowance is respectfully solicited.

Respectfully Submitted,



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